



American River Watershed Project

Post Authorization Change Report

American River Watershed Project

Folsom Dam Modification and Folsom Dam Raise Projects

Appendix F

Cost Distribution



US Army Corps
of Engineers

Sacramento District
South Pacific Region

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CHAPTER 1.0 INTRODUCTION

1.1 BACKGROUND

The U.S. Army Corps of Engineers (Corps) and the U.S. Department of Interior, Bureau of Reclamation (Reclamation) have found that an auxiliary spillway controlled by six submerged tainter gates (6 STG Element, also referred to as the Joint Federal Project or JFP) off the left abutment of Folsom Dam presents an opportunity for both dam safety risk reduction and flood damage reduction. The Corps and Reclamation devised a procedure to equitably divide the construction of the JFP. The Reclamation – Corps partnership to construct the JFP will be implemented through construction work packages. The two agencies will use work packages to assign construction responsibilities, minimize transferring funds between agencies, and complete their respective parts of a complete project.

The Energy and Water Appropriations Act of 2006 (PL 109-103) authorized the Corps and Reclamation to collaborate to maximize flood damage reduction improvements and address dam safety needs at Folsom Dam.

The agencies devised a procedure to calculate a dam safety – flood damage reduction distribution percentage, and used the percentage to distribute work items between the Corps work package and a Reclamation work package. Features included in the Corps work package are not necessarily specific to flood damage reduction, but all costs of the Corps work package are considered flood damage reduction costs, and would be budgeted and cost-shared as such.

This appendix describes the procedure for calculating the cost distribution flood damage reduction– dam safety percentage, using the percentage to determine flood damage reduction and dam safety target costs for work packages, and dividing work items into the work packages so that the costs approximate the target costs and the work reflects dam safety construction for the Reclamation work package and flood damage reduction construction for the Corps work package.

Cost distribution contrasts with cost allocation, because cost allocation is between purposes, and cost distribution assigns costs to dam safety, which is not a purpose. Cost distribution here is development of a percentage may be regarded as assigning costs to different programs or authorities. Neither the Corps nor Reclamation has regulations on cost distribution, but both may rely on their respective cost allocation regulations as appropriate. Reclamation's cost allocation regulations are attached to this appendix.

Development of work packages is summarized in **Chapter 6**. **Chapter 6** includes text on the methodology and principles of distribution of work and work packages. This text will be repeated in Reclamation's report on Folsom dam safety. .

Economic cost may be calculated differently than financial cost. The economic cost of flood damage reduction is compared with the flood damage reduction benefits, to determine economic feasibility. Economic cost is discussed in the main report and the economic appendix.

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CHAPTER 2.0 COST DISTRIBUTION

2.1 PROPORTIONAL METHOD OF COST DISTRIBUTION

A “proportional” method is used to distribute costs of the Six Submerged Tainter Gate Element (6 STG Element), also referred to as the Joint Federal Project (JFP). This distributes costs based on a ratio of the single purpose construction costs to the sum of the single purpose construction costs.

$$\text{Flood Damage Reduction (FDR) share} = (\$ \text{ single purpose FDR}) / [(\$ \text{ single purpose FDR} + \$ \text{ single purpose DS})] \times (\$ \text{ 6STG})$$

The single purpose dam safety project is a fuseplug spillway. This would safely pass the PMF, but would provide no flood damage reduction. The single purpose flood damage reduction project is identical to the 6 STG Element. Single purpose plans are further discussed below.

The resulting percentages are applied to the construction cost of the 6 STG Element to calculate basic flood damage reduction and dam safety construction costs, which serve as target costs for the work packages. Work packages are then formulated for flood damage reduction and dam safety. The 6 STG Element construction work items are divided among the work packages so that dam safety and flood damage reduction costs are close to the target costs. Once work packages are defined, each agency developed its own cost estimate for its work package.

This procedure is adopted because it best meets the budgeting and construction needs of Reclamation and the Corps. This contrasts from traditional cost allocation which is to equitably assign costs between benefit-generating project purposes. In this case, the flood damage reduction benefits and economic costs are developed independently. This procedure seeks not only equitable costs between flood damage reduction and dam safety, but also a way for the two Federal agencies to partner constructing a single, complete project. The distributed costs to dam safety and flood damage reduction show a savings comparable to the relative dollar contributions of each single purpose plan. This is important in this case because the flood damage reduction single purpose plan has a much greater cost than the single purpose dam safety plan.

2.2 DEVELOPMENT OF COSTS FOR COST DISTRIBUTION

The cost estimates presented herein were developed for the purpose of cost distribution only. They are specifically for cost distribution because the Corps and Reclamation use different cost estimating procedures; thus, Corps estimates and Reclamation estimates are not directly comparable. These costs are, by Corps definition, a reconnaissance-level estimate based on the probable type and size of the project. Each estimate includes construction features, lands and damages, relocations, environmental compliance and required mitigation, engineering and design, construction management, and contingencies. The cost estimate method established reasonable costs sufficient to support the proposed cost distribution process. The estimates were developed using quotes, calculations, unit prices, and historical data as backup.

Cost estimates were prepared previously from different sources. The cost estimates are done for the fuseplug (single purpose dam safety project), and the 6 STG Element (which serves as both the single purpose flood damage reduction project and the JFP). The costs were modified to be comparable to each other. The new, comparable cost estimates were prepared by a third party, Montgomery Watson Harza consultants. A team of cost engineers from Reclamation and the Corps reviewed the cost estimates.

2.3 SIX SUBMERGED TAINTER GATE AUXILIARY SPILLWAY COST

The 6 STG Element is an auxiliary spillway controlled by 6 submerged tainter gates. Other features of the Selected Plan, a 3.5 - foot raise, and replacement of the emergency and service spillway gates, are specific flood damage reduction costs. All dam raise costs are excluded from the cost distribution. The 6 STG Element is both the dual function plan and the least cost single purpose flood damage reduction plan. The cost estimate for cost distribution is discussed in the next section.

2.4 DEVELOPMENT OF LEAST COST SINGLE PURPOSE PLANS

Costs of single purpose plans are input to the proportional method. The least cost single purpose dam safety plan is an auxiliary spillway with a fuseplug, which Reclamation has developed. The fuseplug spillway safety passes the PMF using Reclamation criteria at a least cost, but provides no flood damage reduction benefits. For the purpose of input to the SC-RB analysis, dam safety benefits are considered equal to cost.

The single purpose flood damage reduction project is identical to the 6 STG Element (JFP). The single purpose flood damage reduction has to be a complete project that can be implemented. Thus, this modification to Folsom Dam must meet basic dam safety requirements, and safely pass the full PMF. A purely functional single purpose flood damage reduction project that would only be required to not make hydrologic dam safety any worse would be a smaller spillway and have less gates, but since it would not safely pass the PMF, it is considered not implementable.

This configuration provides \$89.9 million in average annual flood damage reduction benefits. This plan reduces risk of flooding to a 1 in 156 annual exceedance.

The 6 STG Element and single purpose plans occupy the same location. This contrasts with typical cost allocation between purposes, for which single purpose plans use different locales. Since this is an evaluation to distribute costs for agency contribution to a single project not involving purposes, it is more appropriate to not use this procedure. Both the District and the Reclamation local offices agreed that each single purpose project should assume that the other single purpose project has not been constructed and is not part of the base condition. This is different than the without-project condition used to evaluate flood damage reduction benefits, which includes the fuseplug spillway.

Single purpose costs are shown in **Table 2-1**. To assure that the costs were comparable to each other, a third party, MWH, under contract to the Corps, developed the cost estimates for the single purpose plans. The cost estimates are less than feasibility level, and are intended for

cost distribution purposes only. The costs were reviewed by a team of Corps and Reclamation engineers and estimators.

The single purpose costs were then further modified to subtract costs that vary between Reclamation and the Corps. The costs were modified as follows:

- Sunk costs incurred by both Reclamation and the Corps were subtracted (these are agency-specific costs).
- Planning, engineering & design (PED) costs were subtracted. PED procedures vary between agencies.
- Construction supervision & administration (S&A) costs were subtracted. S&A procedures vary between agencies. S&A costs include agency-specific costs that do not necessarily reflect a pure construction cost.
- Construction contingencies were subtracted. Contingencies in the third party estimate did not add to the accuracy of comparison of the two estimates.
- Other miscellaneous costs, such as recreation mitigation and allowances for possible contract fees, were subtracted.
- Interest during construction is replaced with a cost escalation allowance, computed from Notice to Proceed to the mid-point of construction. This negates the difference in authorization, appropriation, and budget tasks and time that would skew costs towards flood damage reduction.

The 6 STG Element modified cost for cost distribution is \$483.2 million. . The fuse plug modified cost for cost distribution is \$123.2 million.

2.5 COST DISTRIBUTION USING THE PROPORTIONAL METHOD

Using the proportional formula shown above, the dam safety percentage is:

$$\begin{aligned} \text{Dam Safety (DS)} &= \text{fuseplug cost} / (\text{fuseplug} + 6 \text{ STG cost}); \\ &= 123.2 / 606.37 = 0.2032 = 20 \text{ percent} \end{aligned}$$

The flood damage reduction percentage using this formula is:

$$\begin{aligned} \text{Flood Damage Reduction (FDR)} &= 6 \text{ STG cost} / (\text{fuseplug} + 6 \text{ STG cost}); \\ &= 482.17 / 606.37 = 0.7968 = 80 \text{ percent} \end{aligned}$$

The resulting distribution percentage is 20 percent dam safety, 80 percent flood damage reduction.

**TABLE 2-1
MODIFICATIONS OF SINGLE PURPOSE COSTS**

Construction Cost Comparisons (w/o Contingencies)				
(\$ Millions)				
Fuseplug				
Table A				
Item	Costs	Cost Adjustments	Total	Notes
<i>First Costs:</i>				
Construction	99.596	0.000	99.596	
PED	3.000	-3.000	0.000	PED cost is excluded from total
S&A	13.000	-13.000	0.000	S&A cost is excluded from total
NEPA Mitigation	6.000	0.000	6.000	
Cultural Mitigation	6.000	0.000	6.000	
Security	2.400	0.000	2.400	
Relocations/Restorations	n/a	0.000	0.000	Access roads, utility relocations, site restoration
Sunk Costs	5.000	-5.000	0.000	Sunk cost is excluded from total
Subtotal First Costs	134.996	-21.000	113.996	Construction costs (w/o contingencies) & specific work (W.P.) package costs.
<i>Additional Costs:</i>				
Escalation	0.000	9.158	9.158	3% Escalation allowance (from NTP to MPC)
Total	134.996	-11.842	123.154	Total: Construction Direct/Indirect Costs + Agency-Specific W.P. Costs + Escalation
6 STG Element				
Table B				
Item	Costs	Cost Adjustments	Total	Notes
<i>First Costs:</i>				
Construction	413.173	0.000	413.173	
PED	50.000	-50.000	0.000	PED cost is excluded from total
S&A	58.000	-58.000	0.000	S&A cost is excluded from total
NEPA Mitigation	6.000	0.000	6.000	
Cultural Mitigation	6.000	0.000	6.000	
Security	4.200	0.000	4.200	
Relocations/Restorations	4.789	0.000	4.789	Access Roads, Utility Relocations, Site Restoration
Sunk Costs	55.000	-55.000	0.000	Sunk cost is excluded from total
Subtotal First Costs	597.162	-163.000	434.162	Construction Costs (w/o contingencies) & Specific Work (W.P.) Package Costs.
<i>Additional Costs:</i>				
Escalation	0.000	49.010	49.010	3% Escalation allowance (from NTP to MPC)
Total	597.162	-113.990	483.172	Total: Construction Direct/Indirect Costs + Agency-Specific W.P. Costs + Escalation

Notes:

1. October 2006 price level
2. All cost items are listed without contingencies.
3. Costs developed by a 3rd party, MWH under contract with the Corps.

2.6 DEVELOPMENT OF WORK PACKAGES

To develop work packages, target costs for each work package were calculated. The percentages are multiplied by the same modified 6 STG Element cost to derive the target costs for the Corps and Reclamation work packages.

The target cost for dam safety is as follows:

$$\begin{aligned}\text{Dam Safety (DS) target cost} &= \text{DS percentage} \times \text{modified construction cost of the 6 STG Element} \\ &= 0.2032 \times \$483,170,000; \\ &= \$98,168,680\end{aligned}$$

The target cost for the flood damage reduction work package is as follows:

$$\begin{aligned}\text{FDR target cost} &= \text{FDR percentage} \times \text{modified construction cost of the 6 STG Element}; \\ &= 0.7968 \times \$483,170,000; \\ &= \$385,000,000\end{aligned}$$

Two work items to construct the JFP, one for the Corps and one for Reclamation, were formulated. Individual work items were distributed between the Corps' flood damage reduction work package and Reclamation's dam safety work package using the following criteria:

- The total costs of the individual work items should match as closely as possible the target costs for each work package.
- The Reclamation work package would include, to the extent possible, the construction of those portions of the 6 STG Element that coincide with fuseplug spillway features. The Corps work package would include the balance of the work, associated with flood damage reduction.
- The distribution of work items should minimize construction risk (e.g., complications from two operations being conducted at the same time at the same place) and increase construction efficiency.
- The packages should minimize problems of one agency interfacing with the previous work of the other agency.
- Construction risk should be balanced between work packages.
- Execution of construction to realize project benefits as quickly as possible.

The work package basic line items, the sum of the cost of the line items, and the original target cost values for flood damage reduction and dam safety are shown in **Table 2.2**.

TABLE 2-2
JOINT FEDERAL PROJECT INITIAL WORK PACKAGES ¹

Cost Account / Features	Reclamation Work Package	Corps Work Package	Notes
Lands	-	-	No lands purchase required
Relocations	42" dia. water pipe relocation		Since the single relocation is part of the Reclamation work package, it is not a flood damage reduction non-Federal sponsor responsibility
Construction & Mitigation	Site preparation, initial, including roads & utilities Chute excavation Stilling basin excavation Control structure, partial excavation foundation remediation Physical site security NEPA/CEQA commitments Environmental mitigation Permitting	Site preparation, follow-on Chute construction Stilling basin construction Control structure remaining excavation construction remaining foundation work Approach channel excavation Permitting Site restoration.	Construction features distributed without contingency costs Contingencies to be added back in to each agency's cost estimate
Planning, Engineering, Design	-	-	Not part of initial construction work package, to be added back in to each agency's cost estimate
Supervision & Administration	-	-	
Sunk Costs	-	-	
Cost of sum of features ³	\$98.8 million	\$382.2 million	\$481.0 million
Percent	20.54	79.46	100.0
Target costs from Cost Distribution	\$ 98.2 million	\$385.0 million	\$483.2 million
Percent of Target Costs	20.32 percent	79.68 percent	100 percent

Notes:

1. All costs are for cost distribution and development of work packages only. Each agency has developed a full cost estimate of its work package.

2.7 CORPS FLOOD DAMAGE REDUCTION WORK PACKAGE COST

Once the work package items were defined as described above, Reclamation and the Corps each developed cost estimates of their respective work packages. Each agency used its own cost engineering, estimating, and cost escalation procedures. Each agency added its costs for construction contingencies, planning, engineering and design, supervision and administration, sunk costs, escalation costs, and other agency specific costs. Each cost is developed to a feasibility level of detail. The Corps work package cost was developed using MCACES. The cost estimate for the Corps work package is in the PAC main report in different chapters. Reclamation is engaged in detailed cost engineering of its work package.

Each agency will treat its work package as its project to construct. Although each work package contains joint features and costs needed for both dam safety and flood damage reduction, the Corps work package cost will be treated as the flood damage reduction cost and the Reclamation work package will be treated as the dam safety cost. For budgetary and reporting purposes, flood damage reduction economic benefits will be compared to the Corps work package cost. The Corps will cost share its work package with the non-Federal flood damage reduction sponsor, the State of California. Since the final work packages will not have consistent agency program costs, their costs will not sum to a total cost estimate for the JFP as if it were prepared by a single agency. Rather, the two work packages are individually reported projects.

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CHAPTER 3.0 ALTERNATIVE PROCEDURES

3.1 SEPARABLE COST – REMAINING BENEFIT

The separable cost – remaining benefit (SC-RB) is an alternative method to distribute costs. SC-RB is the established method of allocating costs between purposes in a multipurpose water resources project. For both Reclamation and the Corps, it is the preferred method of assigning costs for multipurpose projects.

Although dam safety is not a purpose, the SC-RB still may be applied for the JFP. Both Reclamation and the Corps have precedents for using SC-RB to distribute project costs between a legitimate water resources purpose and dam safety.

SC-RB is not used to distribute the 6 STG Element costs because it does not fully apply to dividing the project costs between the two agencies. The dam safety element is not a project purpose and has no quantifiable economic benefit associated with it. Since the SC-RB uses benefits in its calculations, it is a less representative method than is the proportional method. The two agencies desired a procedure that would result in a cost savings to both agencies, which could then be enjoyed by their respective non-Federal sponsors. The SC-RB method, however, was not meant to necessarily produce that result, and in this case does not appear to achieve this result.

The SC-RB method does not resolve cost estimating differences or other inequalities in costs. Therefore, costs used as input would likely have to be modified similar to the process shown in **Table 2-1**. There are many alternative modifications of costs that could be input into an SC-RB calculation. A sensitivity analysis was done using different versions of costs with varying modifications to make the dam safety and flood damage reduction single purpose costs more equitable or comparable. The single purpose plans remained a fuseplug for dam safety and the full 6 STG Element for flood damage reduction. The SC-RB produced results between about 10 percent dam safety – 90 percent flood damage reduction and 13 percent dam safety – 87 percent flood damage reduction. If the 10 – 90 percentages were applied to a 6 STG Element spillway costing \$821 million, the following savings would occur:

FDR savings: 6 STG cost – FDR share = \$821 million – \$739 million = \$82 million

DS savings: fuseplug spillway cost – DS share = \$200 million - \$82 million = \$118 million

Although both agencies would achieve savings, the savings do not reflect the relative contributions to the project. The expectation is that flood damage reduction being the larger contributor to the 6 STG Element should enjoy a greater savings in cost.

3.2 FUSEPLUG FIRST ADDED

An alternative method is to treat costs of features needed for flood damage reduction as an increment to dam safety. Reclamation is committed to correcting the PMF deficiency, even if

the Corps is unable to participate in a 6 STG Element. Dam safety cost would equal the cost of constructing a dam safety only (fuseplug) spillway. Flood damage reduction cost would equal the total project cost minus the dam safety cost. Using this method, all cost savings would go to flood damage reduction; thus, it is considered not equitable. This method is not used or shown in this report.

Reclamation Manual

Directives and Standards

(9) 6/9/95 Pages 1 – 4

NEW RELEASE

Subject: Cost Allocations

Purpose: Establish the requirement that cost allocations are to be performed on Reclamation projects and the legal authority for accomplishing this activity.

Authority:

- PEC P01, Program Economics, Revenues, and Contracts - Final Cost Allocation
- Economic and Environmental Principles and Guidelines for Water and Related
- Land Resources Implementation Studies (P&G).
- Reclamation Project Act of 1939 (Section 9).
- Federal Water Project Recreation Act of 1965, Public Law 89-72, as amended by the Water Resources Development Act of 1974, Public Law 93-251.
- Water Supply Act of 1958, Public Law 85-500.
- Reclamation Reform Act of 1982, Public Law 97-293.
- Fish and Wildlife Coordination Act of 1958, Public Law 85-624.

Contact: Environmental and Planning Coordination, D-5100, Economics Branch, D-8270

1. Need for Cost Allocation.

A. Requirements. Reclamation law and associated policy require an allocation of costs to components or purposes of projects in order to: (1) test financial feasibility of reimbursable components or purposes by a comparison of estimated project costs with anticipated revenues, and (2) after construction, establish and measure compliance with project financial requirements. The primary purpose of the final allocation is to determine the assignment of costs to beneficiaries for repayment. As cost-sharing requirements differ by law among the purposes or components served by a project, a systematic and impartial process of allocation is required to determine and assign those costs that are clearly identifiable with the particular purposes which they serve, and to equitably apportion the remaining costs which jointly serve two or more purposes.

B. Initial Cost Allocation. There are two essential points at which cost allocations are made. An initial allocation is made during plan formulation to provide a preliminary estimate of the financial feasibility of individual project elements and the project as a whole. Thus, in the project planning stage, project costs are allocated to reimbursable and nonreimbursable purposes to test financial feasibility of each purpose by a comparison of estimated costs with anticipated revenues. The reimbursable cost estimates are then used as the basis for negotiation of repayment

contracts, which are subject to the final cost allocation. Coincidentally, the allocation yields an estimate of nonreimbursable costs for the project as a whole, so as to allow judgement as to whether the Federal investment falls within the limits of policy guidelines.

C. Final Cost Allocation. When construction of the project is determined to be substantially complete, a final cost allocation is required. At this point, most postauthorization planning, design, construction, and interest during construction (IDC) costs are known, and operation, maintenance, and replacement (OM&R) costs are more clearly defined. This final allocation, therefore, determines actual reimbursable and nonreimbursable costs and is the basis for assignment of costs to beneficiaries for repayment.

D. Treatment of Purposes. Neither the ability of a particular purpose to repay its cost nor knowledge of a desirable rate will influence the amount of costs allocated to that purpose; therefore, allocated costs and estimated repayment will be determined independently. All project purposes will be accorded comparable treatment in the cost allocation process, as each is entitled to its fair share of the advantages resulting from the plan of development.

2. Responsibility for Cost Allocation.

A. Implementing Agency. Cost allocations will be made by the agency responsible for implementation of a project. Coordination with other agencies having responsibilities for particular purposes will be conducted at all appropriate administrative levels. For Reclamation projects, cost allocations will be performed by Reclamation staff knowledgeable in cost allocation procedures under the direction of the responsible area or regional office. Cost allocations which establish contract terms and conditions and/or result in initiation of repayment will be transmitted by the Regional Directors to the Commissioner's Office for approval. Preliminary cost allocations prepared for planning or other purposes will be approved by the Regional Directors. Annual updates of cost allocation and repayment data included in budget justification documents will be approved by the head of the division in the regional office that has the responsibility for preparing the documents.

B. Documentation. It is important that all elements of the allocation process be carefully documented. This is particularly important in the derivation of benefits, single-purpose alternative (SPA) costs, separable costs, and reimbursable costs.

3. Costs to be Allocated.

A. Costs to be Allocated. National Economic Development (NED) Account costs defined below as total project costs will constitute the costs to be allocated for projects in all stages of planning, construction, and operation. In the allocation process, these costs are adjusted for time of occurrence by the application of appropriate compound interest and annuity factors to derive equivalent present worth monetary values at the beginning of the first year of project service. After allocation, the economic equivalents will be reconstituted and reconciled to the original unadjusted values to satisfy reporting and accounting requirements.

B. Allocations During Construction. After construction begins, costs to be allocated will reflect annual financial statements showing the effects of retirement, replacement, reconstruction, abandonment, maintenance, and other transactions recorded during the period of

construction and operation. Costs used in the allocation are the latest official estimates of Reclamation and cooperating agencies. In feasibility studies, cost estimates for separable costs and SPA's will be at least of appraisal grade.

C. Nondepreciated Costs. Complete, nondepreciated costs are to be used in all phases of the allocation. This will require vigilance during a final allocation due to the fact that some project costs are currently accounted for on a depreciated basis by Reclamation finance offices.

D. Documentation. A table showing costs to be allocated will precede the cost allocation in planning reports. Costs specifically identified with a particular purpose, as well as separable and joint costs, will be shown with specific and separable costs listed by component or purpose. Cost constituents, i.e., construction, IDC, OM&R, etc., will be separately identified.

(1) Deferred Uses and Nonreimbursable Costs. Costs incurred for excess capacity to facilitate subsequent additions, or costs of other provisions for deferred project uses, will be included in the total costs to be allocated and then segregated by allocating directly to the deferred-use category. An example would be costs expended for water storage capacity for anticipated future M&I water demands as authorized under the Water Supply Act of 1958, as amended. The deferred costs would encompass all costs applicable to the deferred use or component including both separable costs and joint costs, as appropriate. In similar manner, the nonreimbursable costs for highway improvement and for postauthorization archeological salvage investigation will be directly assigned to these purposes and set aside. This will permit completion of the main cost allocation by standard procedure.

(2) Total Project Costs to be Allocated. All NED costs of project implementation are to be allocated. Costs of project implementation include costs incurred by the responsible Federal entity and, where appropriate, contributed by other Federal or non-Federal entities to construct, operate, and maintain a project in accordance with sound engineering, economic, and environmental principles. These costs, as defined in chapter II, section XII of the P&G, include post authorization planning and design costs; construction costs; construction contingency costs; administrative service costs; fish and wildlife habitat mitigation costs; relocation costs; historical and archeological salvage costs; land, water, and mineral rights costs; environmental enhancement; and OM&R costs.

(3) Non-Federal Costs. Disposition of project costs financed by a non-Federal entity will vary depending on the particular cost category. In the instance of a non-Federal contribution for an add-on purpose which involves only stand-alone incremental costs, i.e., for a purpose which does not depend directly on joint project facilities for its value, the costs are directly set aside to that purpose. If benefits (or SPA costs, if applicable) related to the purpose are included within the allocation, those benefits must also be subtracted out or set aside so as to not influence the remaining allocation process.

If a non-Federal contribution is made for a purpose which is an integral part of the project, the contribution is included with other (Federal) costs for the purpose and carried through the allocation process so that the purpose accrues a proportionate share of joint costs. The non-Federal contribution would then be included as a segment of non-reimbursable costs at the conclusion of the allocation process.

4. Benefits Used in Cost Allocation. Categories of monetary benefits (or other measures of beneficial use) and computation procedures used for NED objective purposes found in the cost allocation will be the same as those used for project justification (P&G, chapter II). All benefits, SPA costs, and costs for allocation purposes will be placed on a comparable basis in relation to time of occurrence using the same interest rate and period of analysis. Benefits will be capitalized to their present worth (lump-sum) amounts at the first year of project service.

5. Interest Rates. The interest (discount) rate to be used in cost allocation and for the computation of imputed IDC will be the same rate used in the economic analysis of the project (P&G 2.1.2). At the conclusion of the allocation process, IDC allocated to interest-bearing reimbursable purposes will be converted to the amount that would result from computation at the applicable interest rate for repayment of individual purposes. Interest rates for cost sharing or repayment are discussed in additional Program Economics, Revenues, and Contracts Directives and Standards. For authorized projects, the interest rate used for cost allocations will reflect the rate applicable at the time of authorization.

6. Period of Analysis. The period for estimating benefits and costs used in the cost allocation process will be the same as that used in project formulation and evaluation which is the lesser of the economic life of the project, or 100 years beyond the initial date of service (P&G 1.4.12).

PEC P01

Reclamation Manual

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(Minor revisions approved 03/07/2006) Page 1

NEW RELEASE

Subject: Final Cost Allocation

Purpose: Establish the requirement that final cost allocations are to be performed upon completion of construction of a project.

Authority: Reclamation Project Act of 1939, Section 9, as amended.

Contact: Contract Services Office, D-5600

1. Objectives of Final Cost Allocations. A final cost allocation is to be performed when construction of a project is determined to be substantially complete. This allocation will determine reimbursable and non-reimbursable costs and apportion these costs among the various project purposes. The objective is to ensure that costs are allocated to project purposes in accordance with Reclamation law and that reimbursable costs are assigned to the appropriate beneficiaries for repayment. Interim cost allocations performed during the planning and construction of the project may not be used to determine the final repayment obligation.

2. Responsibility for Conducting Final Cost Allocations. Regional Directors should conduct a review of their projects and determine which of them need final cost allocations. They should also establish schedules for completion of these final cost allocations and ensure that sufficient funding is programmed. In addition, priority will be given to maintaining the files for cost allocations and supporting documentation to ensure they are current and accessible. The files should include the supporting documentation to demonstrate how the allocation was derived. The final cost allocation and the supporting documentation should provide the basis for repayment obligations included in contracts and serve as a basis for project reallocations to be performed if water demands and uses change in the future. As future projects are completed, the Regional Directors are to ensure that final cost allocations are performed upon completion of construction.

3. Review of Final Cost Allocations. Regional Directors will review all final cost allocations. Subsequent to this review, the Regional Director will submit the final cost allocation to the Office of Program and Policy Services with a recommendation for review and approval by the Commissioner. Reviews will address technical adequacy and adherence to Reclamation policy.

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